



COLORADO

Governor's Office of Information Technology

CoCo: Improving the Customer Experience with myColorado's Digital Chatbot

State: Colorado

Agency: Governor's Office of Information Technology

Award Category: Emerging & Innovative Technologies

Project Dates: July 7, 2021 - Feb. 17, 2023

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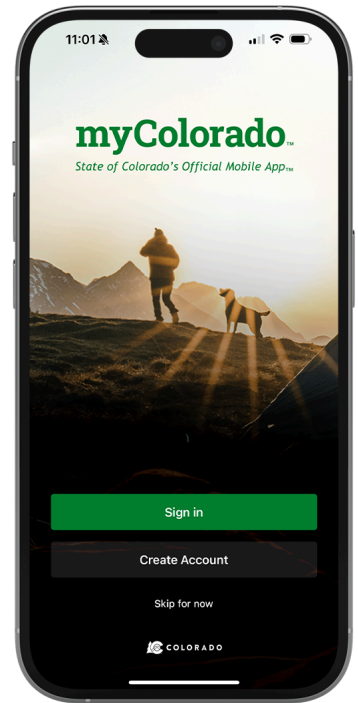
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EXECUTIVE SUMMARY

As the State of Colorado's official mobile app™, [myColorado™](#) provides a secure and convenient way for Coloradans to access state services anytime, anywhere. Some key features are the Colorado Digital ID™, Colorado Parks & Wildlife Digital Fishing, Combo and Small Game Licenses, the digital COVID-19 myVaccine Record, and many more. With the exponential growth of services available in the 24x7 app and nearly 1,000 new accounts created every day, the Governor's Office of Information Technology (OIT) needed to find a cost-effective way to provide after-hours support and alternatives to live agents for the most commonly asked questions.

OIT's technical subject matter experts decided to implement an Amazon Web Services (AWS) chatbot, a mobile app-friendly technology that would allow Coloradans to chat with our customer support analysts through artificial intelligence (AI), paving the way for customized, engaging conversations. Coloradans want convenience and ease when using and accessing government services. With the myColorado chatbot, named CoCo, the nearly 1.5 million users have a secure, accessible and modern way to get answers to common questions, request a live agent, or submit a support ticket after hours if Coco cannot answer their questions.

The myColorado chatbot, named CoCo, handles about 37% of customer requests for help with common problems such as recovering accounts, asking routine questions about the app, or seeking answers to common questions regarding the Division of Motor Vehicles, Department of Revenue, Colorado Department of Public Health & Environment, and Colorado Parks & Wildlife. The result is reduced wait times for those needing advanced technical support from a live chat agent, which delivers a better customer journey for all myColorado users.



IDEA

The myColorado app was developed by the Governor's Office of Information Technology along with state agency partners to offer a variety of services. These include:

- Colorado Department of Public Health & Environment: [myVaccine Record](#) and access to the [Safe Medication Take Back program](#)
- Department of Revenue - Division of Motor Vehicle: [Colorado Digital ID™](#) and [Vehicle Services](#) such as eTitle and vehicle registration
- Department of Revenue: [Sales Tax Lookup](#)
- Colorado Parks & Wildlife: [Digital licenses and passes](#) including the Keep Colorado Wild pass and resident fishing, small game, and small game and fishing combination licenses
- Colorado Department of Education: [Educator Certificates](#)
- Colorado Department of Agriculture: [Digital Pesticide Applicator Licenses](#)
- [Colorado State Patrol](#) (and other law enforcement agencies): accept the Colorado Digital ID during traffic stops

With the exponential growth of services available 24/7 in the myColorado app and nearly 1,000 accounts being created daily, the backlog of open tickets from calls/inquiries requiring research and callbacks also grew exponentially. We needed an advanced solution to serve the users more efficiently, including after-hours support and an alternative to relying on live agents for commonly asked questions.

In today's world, Coloradans want convenience and ease when using and accessing government services. With advances in artificial intelligence, our technical experts suggested that a bot would be the right technology to satisfy the need for a more sophisticated level of customer support, manage the workload, and reduce wait time for a better customer experience while also meeting the accessibility, security and privacy needs of the myColorado users.

IMPLEMENTATION

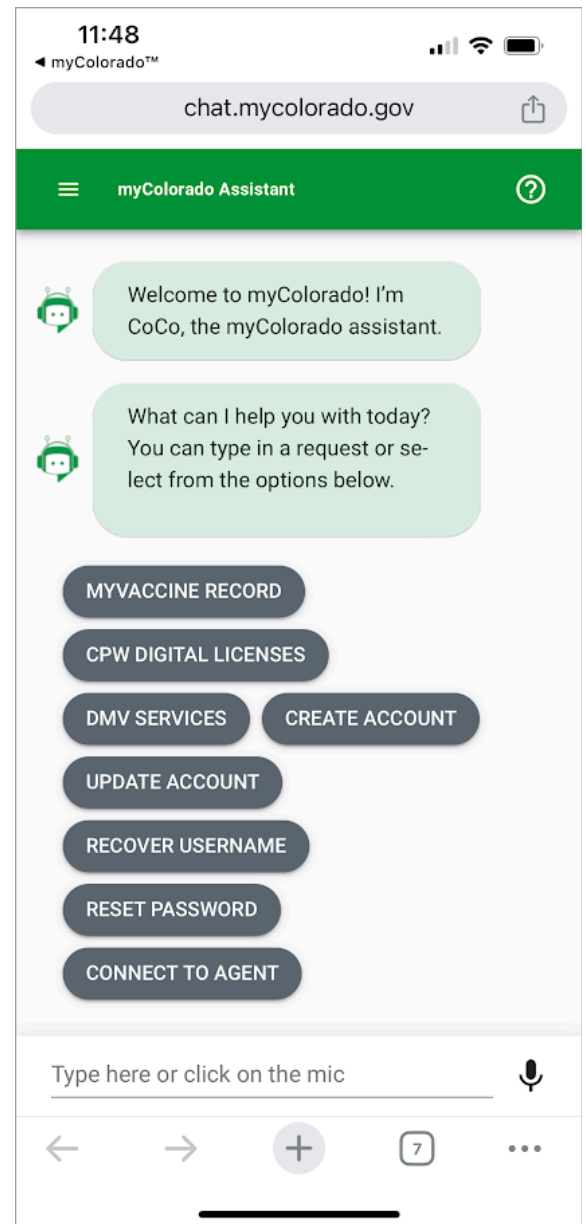
CoCo was developed to provide accurate general assistance with the myColorado app, including how to set up an account and use features or services, as well as how to contact and interact with our agency partners and get the most out of their offerings.

Implementing CoCo was a team effort between three functional groups within OIT: AWS omnichannel engineers, AWS cloud engineers and the myColorado scrum team, a mature agile team that encourages high collaboration, team empowerment and built-in quality within the software development life cycle.

The myColorado team spent more than one year gathering data, vetting the top user-asked questions, and common troubleshooting issues our users encounter. Using customer support scripts and website information that we already had available, the team was able to narrow down the most common problems and formulate simple question-and-answer scenarios that a chatbot could manage and input them into the test environment. The team was ambitious and started with over 100 inquiries, ranging from simple questions like “How do I reset my password?” to more complicated troubleshooting questions like “Why can’t I see my driver license?” or “What is XYZ error message?”

The entire team, from developers to customer support analysts, spent several weeks extensively testing the questions and analyzing feedback to ensure our chatbot was giving correct responses and providing full resolution to user inquiries. Our collective goal was to ensure the chatbot could offer easy solutions to low-level inquiries so the support team could focus on more complicated troubleshooting. Once we recorded consistency in response results, the production environment was set up for a go live in February 2023.

This type of technology, which includes machine learning and artificial intelligence, is changing rapidly. To keep up, we implemented continuous process improvement processes that allowed us to make updates, changes and enhancements as needed with direct feedback from the myColorado Customer Support Agents, our marketing and communications team, and most importantly, from our customers, Coloradans. This process flows information quickly through a scrum framework approach where customer support agents are encouraged to join the daily scrum meetings so the development team hears critical feedback from customers. With this approach, most bug fixes and proposed enhancements are then discussed, designed, developed, tested and deployed to production within a two-week sprint. For example, to make the chatbot feel more welcoming and humanized, we designed a new friendly “face” and gave it a new name: CoCo. Additionally, we review the QnA bot continuously, especially when deploying new products and features, to keep the information current and accurately answer our customers’ questions.





Welcome to myColorado! I'm CoCo, the myColorado assistant.

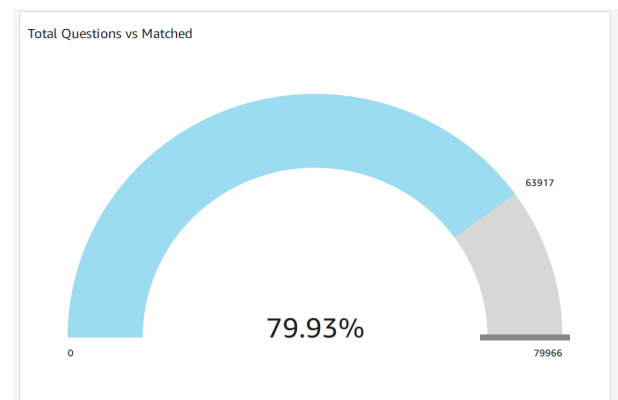


IMPACT

The myColorado chatbot offers users multiple pathways to seek assistance depending on their personal preferences or needs (chatbot, live agent chat, website, phone, email).

Before the chatbot, the myColorado Customer Support team had a backlog of more than 8,000 open tickets from calls/inquiries, each requiring research and callbacks. Since the chatbot was implemented:

- CoCo has handled about 37% of customer requests of an average of 158 daily inquiries to help with common problems ranging from recovering accounts to routine questions about the app to users seeking answers to common questions regarding state services offered by our agency partners. This has reduced the wait time for those needing advanced technical support from a live chat agent, and, in return, delivered a better customer support experience for Coloradans.
- CoCo has answered nearly 80,000 questions with a 79.9% accuracy rate. This type of customer service allows our busy myColorado users to more quickly get back to their lives.
- The average time a live agent spends answering a single question can be between 3 and 9.5 minutes. The chatbot saves between 2,582.70 - 8,178.55 hours annually, which equates into a cost savings of up to \$458,676.53 a year. The time and cost savings can then be repurposed to provide training and focus on continuous process improvement efforts.



Thanks to this implementation, live agents are now empowered and senior agents can handle two live chats simultaneously. Customer Support managers oversee and monitor valuable metrics to understand how we can better serve Coloradans and identify areas of continuous

improvement. With machine learning, the myColorado chatbot continuously improves as users interact with it. As user input and data sets grow, the platform's artificial intelligence gets better at recognizing patterns and improves the algorithm to offer the best possible response to a user's question. Providing one-stop, easy-to-understand, full resolution to common issues has allowed the myColorado support team to use their time more efficiently and give attention to users experiencing more complex problems.

Coloradans want convenience and ease when using and accessing government services. CoCo gives myColorado users the flexibility to engage with us anytime, anywhere, and within the convenience of the palm of their hand with their mobile device. Our chatbot implementation is an example of how the state government is pushing the envelope in innovation to expand its digital services footprint to enhance the lives of its constituents in a user-friendly, accessible and secure manner. That is why we think CoCo is deserving of a NASCIO award!